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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MANNING, JOHN

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,816

Applicant(s)

BAHRAIN ET AL.

Examiner

John Manning

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leary (US Pat No 6,425,133) in view of Hendricks et al. (US Pat No 5,990,927).

In regard to claim 1, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference discloses a method where signal is transmitted to the set top box on an out-of-band channel from the head-end. The signal on the out-of-band channel indicates the in-band service channel service channel frequency. The signals received on the in-band service channel initialize the set top box. The "command sequence transmitted on the out-of-band control channel is abbreviated and includes an instruction to tune the cable television converter terminal 202 to an in-band data channel, which lies within the frequency range used to transmit programming signals. The remainder of the configuration information, which can include commands and/or other types of information is then provided on the in-band data channel" (Col 4, Lines 27-35). The

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reference fails to explicitly disclose the head-end identifying the set top boxes from the return transmission from the set top box. The Hendricks et al. reference teaches the identification of the set top box by sending identification data from the set top box to the head-end so as to maintain accurate account and billing information as well as monitor the authorized channel access. "FIG. 7b shows a response frame format 920' (similar to the frame format 920 end, therefore, commonly numbered with the frame depicted in FIG. 7a, but with the prime indicator added for clarity) for information communicated by the set top terminal 220 to the network controller 214 in response to the polling request of FIG. 7a. The eight-bit flag sequence 922 that appears at the beginning and end of a frame is used to establish and maintain synchronization. Such a sequence typically consists of a "01111110" bit-stream. The address field 924 designates a 4-bit address for a given set top terminal 220. The subscriber region designation 926 is a 4-bit field that indicates the geographical region in which the subscriber's set top terminal 220 is housed. The set top terminal identifier 928 is a 16-bit field that uniquely identifies each set top terminal 220 with a 15-bit designation followed by an appended P/F bit 930. Although field size is provided by this example, a variety of sizes can be used with the present invention" (Col 17, Lines 3-20). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with identification of the set top box by sending identification data from the set top box to the head-end so as to maintain accurate account and billing information as well as monitor the authorized channel access.

In regard to claims 2 and 13 the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the use of a DOCSIS in-band channel. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known in the art to use DOCSIS so as to provide the specifics of the relationship between customer premises equipment and the CMTS (Cable Modem Termination System) at the head-end of the service provider's network. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with DOCSIS so as to provide the specifics of the relationship between customer premises equipment and the CMTS (Cable Modem Termination System) at the head-end of the service provider's network.

In regard to claims 3 and 14 the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the use of a DAVIC in-band channel. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known in the art to use DAVIC so as to provide the specifications of open interfaces and protocols that maximize the interoperability across countries and applications/services. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with DAVIC so as to provide the specifications of open interfaces and protocols that maximize the interoperability across countries and applications/services.

In regard to claim 4, it is implied and *obvious* that the in-band service channel is in the range of 100 MHz to 800 MHz, because it is notoriously well known in the art that the "in-band" frequencies in cable systems cover this range.

In regard to claim 5, in the Leary reference, a "trace and routing" message is sent on an out-of-band channel that contains the in-band service channel frequency parameters and a "flag" which indicated the presence of the in-band signal. The "command sequence transmitted on the out-of-band control channel is abbreviated and includes an instruction to tune the cable television converter terminal 202 to an in-band data channel, which lies within the frequency range used to transmit programming signals. The remainder of the configuration information, which can include commands and/or other types of information is then provided on the in-band data channel" (Col 4, Lines 27-35).

In regard to claim 6 the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the use of UDP/IP packets. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known in the art to use UDP/IP packets so as to provide the head-end with user/set top box identification. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with UDP/IP packets so as to provide the head-end with user/set top box identification.

In regard to claims 7 and 8, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The

reference fails to explicitly disclose the step of authorizing a digital access controller before or after the step of transmitting the out-of-band control signal. Hendricks et al. reference teaches the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services. "As a network controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors, among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 224 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 224 will be stored in RAM within each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220. The network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Therefore, the network controller 214 enables the delivery system to adapt to the specific requirements of individual set top terminals 220 when

the requirements cannot be provided to the operations center 202 in advance. In other words, the network controller 224 is able to perform "on the fly programming" changes. With this capability, the network controller 214 can handle sophisticated local programming needs such as, for example, interactive television services, split screen video, and selection of different foreign languages for the same video. In addition, the network controller 214 controls and monitors all compressors and decompressors in the system" (Col 9, Lines 30-65). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

In regard to claim 9, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the step of pre-loading application software into the set top box. Hendricks et al. reference teaches that the network controller 214 can provide the set top box with "pre-loaded application software" or advance programming as well as "on the fly programming" so as to provide the set top box with software necessary for performing desired functions. The Hendricks et al. discloses that the "network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Therefore, the network controller 214 enables the delivery system to adapt to the specific requirements of individual set top terminals 220 when the requirements cannot

be provided to the operations center 202 in advance. In other words, the network controller 224 is able to perform "on the fly programming" changes. With this capability, the network controller 214 can handle sophisticated local programming needs such as, for example, interactive television services, split screen video, and selection of different foreign languages for the same video. In addition, the network controller 214 controls and monitors all compressors and decompressors in the system" (Col 9, Lines 50-65). Additionally, "the set top terminal 220 is the last component in the delivery system chain. The set top terminal 220 receives compressed program and control signals from the cable headend 208 (or, in some cases, directly from the operations center 202). After the set top terminal 220 receives the individually compressed program and control signals, the signals are demultiplexed, decompressed, converted to analog signals (if necessary) and either placed in local storage (from which the menu template may be created), executed immediately, or sent directly to the television screen" (Col 10, Lines 48-68). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the step of pre-loading application software into the set top box so as to provide the set top box with software necessary for performing desired functions.

In regard to claim 10, the Leary reference discloses a method where signal is transmitted to the set top box on an out-of-band channel from the head-end. The signal on the out-of-band channel indicates the in-band service channel service channel frequency. The signals received on the in-band service channel initialize the set top box. The reference does not explicitly disclose the frequency sweeping of the out-of-

band frequency range. The applicant states that the use of frequency sweeping of the in-band frequency range so as to locate the control signal is widely known and used in the art. Accordingly, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the frequency sweeping of the out-of-band frequency range so as to locate the control signal.

In regard to claim 11, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference discloses a method where signal is transmitted to the set top box on an out-of-band channel from the head-end. The signal on the out-of-band channel indicates the in-band service channel service channel frequency. The signals received on the in-band service channel initialize the set top box. The "command sequence transmitted on the out-of-band control channel is abbreviated and includes an instruction to tune the cable television converter terminal 202 to an in-band data channel, which lies within the frequency range used to transmit programming signals. The remainder of the configuration information, which can include commands and/or other types of information is then provided on the in-band data channel" (Col 4, Lines 27-35). Also, in the Leary reference, a "trace and routing" message is sent on an out-of-band channel that contains the in-band service channel frequency parameters and a "flag" which indicated the presence of the in-band signal. The "command sequence transmitted on the out-of-band control channel is abbreviated and includes an instruction to tune the cable television converter terminal 202 to an in-band data channel, which lies within the frequency range used to transmit programming signals. The remainder of the

configuration information, which can include commands and/or other types of information is then provided on the in-band data channel" (Col 4, Lines 27-35). The reference fails to explicitly disclose the digital access controller connected to a billing system. The Hendricks et al. reference teaches the digital access controller connected to a billing system so as to maintain accurate account and billing information. "network controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors, among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 224 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 224 will be stored in RAM within each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220." (Col 9, Lines 30-50). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the digital access controller connected to a billing system so as to maintain accurate account and billing information.

In regard to claim 12, the Leary system allows for two-way data communications after determining the in-band frequency. Therefore, a return path frequency is determined. The "invention may also include providing configuration information that configures the converter or set-top terminal to provide data services as well as cable television services. For example, electronic television programming guides, internet access, electronic mail, world wide web browsing and other data services may be provided over the cable network. Under the principles of the present invention, a signal on the out-of-band control channel might direct the converter terminal to an in-band channel for configuration data that will allow the terminal to provide any or all of the exemplary data services listed above or any other data services the cable network may provide" (Col 6, Lines 6-20).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 703-305-0345. The examiner can normally be reached on M-F: 7:30 - 5:00 (off every other Wednesday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9695 for regular communications and 703-746-9695 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 308-HELP.

JM
December 15, 2003


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600